

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

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File No. 1114.17(SIM)

Philip J. Armstrong, Project Officer
U.S. Environmental Protection Agency, Region IX
Hazardous Waste Division (H-8-1)
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Armstrong:

**Subject: Quarterly Progress Report for the South Bay MSCA
Fiscal Year 94 for the Quarter 1 October - 31 December 1993**

Attached are two copies of the Quarterly Progress Report. The report covers the tasks in the approved Workplan amendments within the grant amendment award of July 30, 1993. As explained previously, the report is late due to the press of other business. I don't believe there are any significant changes from the project status report as discussed with you, Dave Jones, and Andy Lincoff in January.

As before, I would appreciate any constructive comments you may have to assure compliance of and/or improve the usefulness of the report. Please call me (510/286-0304) if you have any questions.

Sincerely,


Steve Morse
MSCA Program Manager

Attachment: Quarterly Progress Report (2)

cc: SRR, LPK, LKB, BHW, SAH, GW
J. Tarro [SWRCB/DAS(Budgets)]
T. Kremer, EPA (H-6-4)

QUARTERLY STATUS REPORT

October - December 1993

SOUTH BAY MULTI-SITE COOPERATIVE AGREEMENT (MSCA)

EPA GRANT NUMBER V-009403-02-A(10)
(as of July 30, 1993)

State Water Resources Control Board

California Regional Water Quality Control Board
San Francisco Bay Region
South Bay Toxics Cleanup Division

February 15, 1993

SOUTH BAY MSCA SCHEDULE

(updated 2/15/94 by RWQCB; # indicates change since last report)

Site	RI/FS and RAP Completed and Available for Public Comment		Final RAP/ROD Adopted	
	mo/yr	FFY/Q	mo/yr	FFY/Q
1. Advanced Micro Devices - Arques	RI/FS adopted; ROD signed; RA and O&M underway			
2. Advanced Micro Devices - Bldg 901/902	RI/FS adopted; ROD signed; RA and O&M underway			
3. Advanced Micro Devices 915	RI/FS adopted; ROD signed; RA and O&M underway			
4. Applied Materials	RI/FS, RAP adopted; ROD signed/amended; RA and O&M underway			
5. CTS Printex	RI/FS and RAP adopted; ROD signed; RA and O&M underway			
6. Fairchild, San Jose	RI/FS and RAP adopted; ROD signed; RA and O&M underway			
7. Hewlett Packard, 1501 Page Mill	6/94#	3/94	9/94#	4/94
8. Hewlett Packard, 640 Page Mill	6/94#	3/94	9/94#	4/94
9. Hexcel	RAP/ROD Sep 93, but now no longer part of the MSCA (NPL delisting)#			
10. Intel Magnetics / Micro Storage	RI/FS adopted; ROD signed; RA and O&M underway			
11. Intel Santa Clara III	RI/FS & RAP adopted; ROD signed; RA and O&M underway			
12. International Business Machines	RI/FS and RAP adopted; ROD signed; RA and O&M underway			
13. Intersil / Siemens	RI/FS and RAP adopted; ROD signed; RA and O&M underway			
14. National Semiconductor				
Operable Unit 1	RI/FS adopted; ROD signed; RA and O&M underway			
Operable Unit 2	TBD(mid 95)#	TBD(mid 95)#	TBD(late 95)#	TBD(late 95)#
15. Rhône Poulenc/Sandoz Crop Prot Corp				
Uplands Operable Unit (and Annex)	RI/FS adopted; ROD signed; RA completed 11/92 (Annex ESD 3/94)			
Wetlands Operable Unit	TBD(7/95?)#	TBD (95/3?)#	TBD (9/95?)#	TBD (95/4?)#
16. Signetics	RI/FS adopted; ROD signed; RA and O&M underway			
17. Solvent Services	RI/FS & RAP adopted; ROD signed; RA and O&M underway			
18. Spectra Physics	RI/FS adopted; ROD signed; RA and O&M underway			
19. Synertek 1	RI/FS & RAP adopted; ROD signed; RA and O&M underway			
20. Teledyne	RI/FS adopted; ROD signed; RA and O&M underway			
21. TRW/FEI Microwave	RI/FS adopted; ROD signed; RA and O&M underway			
22. Van Waters & Rogers	RI/FS and RAP adopted; ROD signed; RA and O&M underway			

TBD=To Be Determined

Notes: Federal lead sites, for which RWQCB receives funding under MSCA for its support activities, have identical milestones, but are not included here since the RWQCB is not responsible for meeting those time schedules. The State-required RAPs are not adopted until the NBAR is completed; does not affect the Federal Superfund process, only state required Non-Binding Allocation of Responsibility (i.e. NBAR).

MSCA EXPENDITURE/DRAWDOWN DATA
MULTI-SITE THROUGH 12/31/93

MSCA PHASE II PROJECT #	ACCOUNT NUMBER	AMOUNT AUTHORIZED	BAL OF AWARD 09-V-005	AWARD 09-V-009 07/09/93	TOTAL AUTHORIZED	ALL FISCAL YEAR DATA				
						CUM EXP	CUM DRAWS	DIFF	NEXT DRAW	UNABLE TO DRAW
MSCA02-00		0.00			0.00	0.00	0.00	0.00	0.00	0.00
MSCA02-01		0.00			0.00	0.00	0.00	0.00	0.00	0.00
MSCA02-02	K382/KN82/KP82	157,528.00	12,945.00	28,000.00	198,473.00	140,325.16	139,908.90	416.26	416.26	0.00
MSCA02-03	K3H1/KNH1/KPH1	130,184.00	12,945.00	34,004.00	177,133.00	101,798.10	101,672.97	125.13	125.13	0.00
MSCA02-04	KP83	245,248.00		58,743.00	303,991.00	321,393.29	303,991.00	17,402.29	0.00	17,402.29
MSCA02-05	K384	37,378.00	11,030.00		48,408.00	7,721.47	7,721.47	0.00	0.00	0.00
MSCA02-06	KP82	46,543.00		22,760.00	69,303.00	71,025.40	68,569.76	2,455.64	733.24	1,722.40
MSCA02-07	KN85/KP85	271,777.00		165,321.00	437,098.00	245,573.93	239,206.45	6,367.48	6,367.48	0.00
MSCA02-08	KNH9/KPH9	407,106.00		152,700.00	559,806.00	400,958.84	395,041.04	5,917.80	5,917.80	0.00
MSCA02-09	K340/KN40/KP40	71,058.00	11,030.00	27,559.00	109,647.00	63,132.43	62,246.74	885.69	885.69	0.00
MSCA02-10	K386	38,408.00			38,408.00	6,003.90	6,003.90	0.00	0.00	0.00
MSCA02-11	KP88	118,452.00	11,030.00	18,150.00	147,632.00	136,196.49	134,580.69	1,615.80	1,615.80	0.00
MSCA02-12	KN87/KP87	170,899.00	11,030.00	18,150.00	200,079.00	190,107.95	181,929.00	8,178.95	8,178.95	0.00
MSCA02-13/20	KNJ2/KPJ2	118,345.50	11,030.00	30,164.00	159,539.50	121,398.86	120,669.21	729.65	729.65	0.00
MSCA02-14	KP89	47,178.00		28,371.00	75,549.00	60,973.64	60,946.10	27.54	27.54	0.00
MSCA02-15	K3C7	4,620.00			4,620.00	0.00	0.00	0.00	0.00	0.00
MSCA02-16	KP90	217,117.00		49,803.00	266,920.00	244,114.97	243,538.35	576.62	576.62	0.00
MSCA02-17	KP91	300,623.00		33,085.00	333,708.00	355,887.65	333,708.00	22,179.65	0.00	22,179.65
MSCA02-18	K3H5/KNH5/KPH5	151,844.00	10,063.00	17,889.00	179,796.00	151,341.78	151,202.33	139.45	139.45	0.00
MSCA02-19	K393	28,408.00			28,408.00	5,880.53	5,880.53	0.00	0.00	0.00
MSCA02-20	K3J2	118,345.50			118,345.50	100,377.36	99,590.43	786.93	786.93	0.00
MSCA02-21	KN94/KP94	125,380.00	12,945.00	31,904.00	170,229.00	129,599.05	129,450.49	148.56	148.56	0.00
MSCA02-22	K3K1/KNK1/KPK1	162,354.00	14,530.00	31,958.00	208,842.00	153,138.99	152,709.89	429.10	429.10	0.00
MSCA02-23	K3K3/KNK3/KPK3	127,045.00	11,030.00	18,150.00	156,225.00	117,696.33	116,840.02	856.31	856.31	0.00
MSCA02-24	K3K4/KNK4/KPK4	165,091.00	12,945.00	28,103.00	206,139.00	137,663.96	137,468.57	195.39	195.39	0.00
MSCA02-25	K395/KN95/KP95	157,952.00	14,530.00	31,958.00	204,440.00	153,000.06	152,569.63	430.43	430.43	0.00
MSCA02-26		0.00			0.00	0.00	0.00	0.00	0.00	0.00
MSCA02-27	K396/KN96/KP96	206,905.00	10,063.00	21,984.00	238,952.00	182,377.38	181,710.58	666.80	666.80	0.00
MSCA02-28	K397/KN97/KP97	38,408.00	8,770.00	16,371.00	63,549.00	35,985.95	35,973.91	12.04	12.04	0.00
MSCA02-29	KN98/KP98	431,680.00		169,790.00	601,470.00	419,753.18	412,739.40	7,013.78	7,013.78	0.00
MSCA02-31	K3F6/KNF6/KPF6	38,591.00	5,305.00	9,168.00	53,064.00	11,448.19	11,379.61	68.58	68.58	0.00
MSCA02-32	K3J9/KNJ9/KPJ9	164,154.00	11,030.00	18,150.00	193,334.00	138,645.99	138,506.23	139.76	139.76	0.00
MSCA02-33	KNJ1/KPJ1	277,412.00		116,753.00	394,165.00	268,162.00	268,007.33	154.67	154.67	0.00
MSCA02-34	KPR3	27,997.00		15,405.00	43,402.00	34,719.76	31,673.14	3,046.62	3,046.62	0.00
MSCA02-35	KP47	8,078.00		33,745.00	41,823.00	33,832.90	33,697.88	135.02	135.02	0.00
MSCA02-36	KNM6/KPM6		206,989.00	49,369.00	256,358.00	6,357.64	6,270.08	87.56	87.56	0.00
		4,612,109.00	399,240.00	1,277,507.00	6,288,856.00	4,546,593.13	4,465,403.63	81,189.50	39,885.16	41,304.34
		SITE 64				1,213,951.00				
						7,502,807.00				
		IPA				67,358.00				
		TOTAL				7,570,165.00				

TII-6

QUARTERLY PROGRESS REPORT
SOUTH BAY MULTI-SITE COOPERATIVE AGREEMENT
October - December 1993

The goals of the MSCA for this phase are:

To accelerate cleanup at Superfund sites in the South Bay.

To augment the RWQCB's existing programs to ensure that the EPA's requirements, as defined in the National Contingency Plan (NCP), are met for those NPL sites assigned to the RWQCB as lead agency.

* * *

The South Bay Multi-Site Cooperative Agreement (MSCA), Phase II, was awarded and accepted by the State Water Resources Control Board effective April 13, 1988. This progress report for this phase is submitted to satisfy the Special Conditions. This report covers the October - December 1993 quarter as amended in subsequent grant offers, the latest being awarded July 30, 1993, to extend the agreement to December 31, 1993, with partial awards of June 1992 and July 1993. An additional extension has been awarded to September 30, 1994 awaiting approval of the 1994-1996 Workplan.

The MSCA Grant provides funding for activities of the state (i.e. State Board and Regional Board) responsible for coordinating and enforcing groundwater cleanup programs at Federal Superfund sites in the South Bay. The estimated expenditures, staff years, and accomplishments are compared to the work plans of January 28, 1988, March 9, 1989, February 13, 1990, January 1991, and January 22, 1992 (with revisions and reductions per Regional Board workplan amendments of May 3, 1993).

CONTENTS

Program Element	Page
Special Conditions	II-1
Summary and Status of MSCA Tasks and Budgets	III-1
Significant Events and Activities During the Grant Quarter	III-1
Status and Funding of MSCA Tasks	III-2
Forecasted MSCA Tasks and Activities Next 3-6 Months	III-4
SOUTH BAY MSCA GRANT SCHEDULE REQUIREMENTS (RAP/ROD)	III-5
TABLE - Summary of South Bay MSCA Total and Site Expenditures as of 31 December 93	III-6
 TASKS	
A. Program Management	III-7
B. Site Management System	III-8
D. Community Involvement	III-9
E. Tier I Activities	III-10
E2. RWQCB Oversight of NPL PRP Tasks	III-11
Status of Regional Board lead sites	III-13
Status of Regional Board support sites	III-22
Status of Regional Board MSCA Contracts in Support of Task E2	III-25

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**QUARTERLY PROGRESS REPORT
SOUTH BAY MULTI-SITE COOPERATIVE AGREEMENT
July - September 1993**

II - SPECIAL CONDITIONS

Besides the tasks in the MSCA's Workplan, some of the grant's Special Conditions require the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) to perform certain activities. The Revised Special Conditions responded to here are part of the grant offer of June 5, 1992.

An amended Workplan for 1992-1993 for \$2.35 million was submitted to and approved by the EPA with a partial award June 5, 1992. A recent award, dated July 30, 1993, was accepted by the State. Its acceptance does not materially change the direction of the Board's efforts for the quarter or the next 6 months.

Under the terms of the Special Conditions, the Board requested that EPA redirect funds between several of the sites to cover unanticipated costs not budgeted. EPA has agreed to the redirection and included the redirection in the latest grant award. Because the award was later than anticipated, and additional agreed upon work was also needed (and not needed) at some sites, redirection will be needed again.

Due to a change in State accounting to allocate all non-site specific charges monthly (to the appropriate NPL sites in proportion to staff activity), the grant workplan non-site specific tasks (A, B, and E.3.) and their accounting records can be misinterpreted. The budget and expenditures shown for this quarterly review are the *total for all sites*.

EPA continues to finalize the few remaining MSCA sites for initial demands for cost-recovery started in early March 1992. EPA has to date received significant and substantial payments. It is expected that requests for additional annual cost-recovery payments will be made early next year.

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III - SUMMARY AND STATUS OF MSCA TASKS AND BUDGETS

This Section provides a summary as well as details where necessary on the quarterly progress and status of the MSCA tasks in the Workplan of January 1992 and as approved via the July 1993 grant award.

To accelerate the cleanup at the South Bay Federal Superfund sites the EPA assigned the responsibility along with the necessary augmented funding to the State and Regional Boards to accomplish oversight and regulation of the South Bay Superfund sites under Federal and State law and regulations as well as EPA Guidelines.

In all instances the acute toxics threat and risk at the MSCA sites is now either under interim control (awaiting long-term solutions) due to aggressive earlier Board regulation and requirements for initial and interim investigations, removals, and remediation or the Board and EPA have adopted and the Responsible Parties are (or have) constructed and/or implemented the long-term remediation project to control chronic threats. The Regional Board's efforts are now focused primarily on the remaining sites requiring completion of any necessary investigations and development of cleanup alternatives (i.e. the RI/FS process) and a proposed cleanup plan (the RAP) for public review and comment (See Table, page III-5). After public review and comment, the Board will adopt the RAP in a Site Cleanup Order (i.e. CAO) as modified by public comment, staff recommendations and Board guidance. If EPA approves of the Board's actions and selects the same remedy (RAP), they will administratively adopt a Record of Decision (ROD). Close coordination with EPA is maintained during the process; there is no reason to believe that EPA would not choose the same remedy as the Board.

Significant Events and Activities

During the Grant Quarter:

South Bay MSCA Superfund Site Cleanup

Decisions (RI/FS/RAP): All the South Bay Superfund sites have accomplished significant amounts of work to meet Superfund final cleanup decision requirements. The tasks remaining are necessary to meet State and Federal Superfund (all of which the State requires as well) requirements to determine the best alternative considering protection of public health and the environment as well as the maintenance (i.e. high quality groundwater) and protection of the resource (i.e. water conservation and reclamation).

Official Board Actions:

October: None

November: MSC/INTEL SCR amended

December: None

Other MSCA Events/Activities during the Quarter:

Quarterly Enforcement Meeting: Although EPA and the Board project staff met frequently during the quarter, no joint quarterly meeting was held between Cal/EPA DTSC, EPA, and the Board covering the enforcement status of the South Bay toxics cleanup sites -- either Superfund or non-Superfund. This joint meeting was previously formalized in the updated South Bay Enforcement Agreement. At this time the primary area where the three agencies interface is the Stanford Industrial Park area in Palo Alto, Rhône-Poulenc in East Palo Alto where the DTSC was previously the lead agency, and at United Heckathorn and Liquid Gold sites in Richmond where the Board is a support agency to EPA and DTSC.

South Bay Groundwater Task Force: Due to low public attendance and interest, future meetings have been canceled unless a specific topic or site arises that warrants reconstitution of the task force. Contact with the usual participants of the Task Force is maintained through individual site-specific contacts.

Board staffing: During the quarter, the Board's staffing in support of the MSCA was satisfactory. Support of an Information System Technician (IST) is provided on an "as needed" basis from another division within the RWQCB. Because of an extended absence of the IST for most of 1992, the production of the Site Management System (SMS) was suspended with anticipated update expected February 1994. In concert with an effort to reduce the amount of resources necessary to produce the Site Management System, the transfer of the Information System Technician did not significantly affect Site Management System (the published SMS has not been updated since early 1992). It is expected to resume the SMS through the use of the annual update (early 1994) and followups via a computer Bulletin Board System, now on-line as of March 1993.

MSCA Tasks Status (cont.)

1992-1993 MSCA Workplan: The Regional Board submitted the amended 1992-1993 MSCA Workplan in January 1992; the State Board accepted and applied for the amended grant in March 1992; and the EPA awarded the amended Grant in June 1992. The Workplan is effective through September 30, 1993. Revision to the current workplan (reduced budget) and expiration (increased time to December 31, 1993) have been agreed to by EPA (July 30, 1993) and accepted by the SWRCB as of mid August.

1994-1996 MSCA Workplan: Awaiting completion of the 1994-1996 Workplan and further funding from EPA, and at EPA's request to reduce future funding, the Board applied for a no-cost time extension to September 30, 1994. EPA approved the time extension December 22, 1993.

Regional Board staff forwarded the 1994-1996 Workplan to the State Water Board for submittal to EPA on December 21, 1993. The State Water Board expects to make an official application for the 1994-1996 grant late March 1994.

As a result of a meeting with EPA program management in late January, further modifications of the workplan may be necessary but should not hold up the application and award.

EPA Cost-Recovery: In early March 1992, EPA began the process of cost-recovery for the MSCA sites. The demands are for combined costs of the Board (through June 30, 1991) and EPA (through July 31, 1991). By the end of March 1992, several RPs had already paid, and most of the remaining billed sites have paid either in full or partially. A cost-recovery suit has been filed by EPA against Intel, Kim Camp III, CTS Printex, and ADN. Completion of the initial cost-recovery cycle is expected soon and the beginning of a new annual cycle is expected to begin early next year. SWRCB is preparing site accounting records as necessary.

Status and Funding of MSCA Tasks:

The overall status of the Grant tasks is satisfactory, especially with the new grant supplemental award received July 30, 1993. Even after the July 30 award, some redirection of grant funds will still be needed between sites due to work necessary (and not necessary) that was not anticipated in the 1993 submittal for an amended

award. The overall expenditures do not exceed the total MSCA obligations. The status of the individual tasks (and site budgets) varies (see the individual tasks following for detailed descriptions):

A. Program Management: Normal activities continue with an emphasis on assuring the final adoption of RAPs at several sites -- Rhône-Poulenc (wetlands), Hewlett-Packard 640 & 1501, National Semi's OU#2, etc. to assure that time schedules would be met. RD/RA and O&M continues at other sites. The 1994-96 Workplan was also drafted and submitted.

B. Site Management System: The last published quarterly report for October - December 91 was distributed late January 1992. With the leave of absence of the Information System Technician for half of 1992 and transfer to another Board Division upon return, the Regional Board's latest approved workplan has rescoped the SMS to be less IST intensive and still provide greater public access (via limited paper copies and on-line BBS). Expected startup of the revised SMS is early 1994. It now appears that paper copies will still be necessary, at least of a limited nature on an annual basis at least. Interim updates will be maintained on the BBS awaiting the annual update.

D. Community Involvement: Up-to-date and continuing; see specific item. A significant change took place on this task in October as the IPA working on Community Involvement returned to EPA and was not replaced since not enough work remains to justify a dedicated full-time staff person. Community Involvement tasks will now be accomplished by the respective project manager with some tasks being performed by a designated staff person to coordinate overall activities where necessary. Prior training and extensive planning appear to have made this a smooth transition. The impact of this change affects primarily those sites still awaiting final RAP/RODs (e.g. National OU#2, both Hewlett-Packard sites, and Rhône-Poulenc Wetlands) and will be monitored closely by the Program Manager. Because of the staffing change, the Community Involvement task work is being incorporated into the other tasks, primarily Task A. Program Management and E.2, NPL Oversight, and will not be reported separately in this or future quarterly reports unless a significant task or activity is being reported. Overall activities on the sites is reported in Task

MSCA Tasks Status (cont.)

E.2. and will include Community Involvement activities.

Work was also completed on an update of the 1989 EPA brochure on "Status of Superfund Groundwater Cleanup in the South Bay" with publication and distribution in November 1993.

E2. NPL Site Oversight: Currently, we are able to keep up with the staff work load although some schedules have slipped and are still slipping [e.g. Rhône-Poulenc/Sandoz (wetlands OU), National Semiconductor OU#2]. The typical scenario finds that as the cleanup tasks in the RI/FS workplan become solidified and finalized that details formerly unknown or unresolved take on an importance not previously appreciated (e.g. HP sites). Some unforeseen slippages in the current MSCA schedules have occurred and probably will occur again (e.g. agency agreement and oversight for the wetlands portion of Rhône-Poulenc, etc.). State staff will do everything in their power to minimize slippage. Additionally, the utilization of Operable Units is being used (e.g. NSC) where a firm decision can be made on a given unit and a final decision on the remainder of the site can not be made for a considerably longer time (e.g. one year or longer). A review of the site schedule (page III-5) indicates actual and probable slippage from the schedules updated for this quarter and as changed since the last quarter's report. Details on the slippages are covered later by site, but generally they can still be categorized into four categories:

1. Upon review of the PRP submitted RI/FS and proposed RAP, the report and recommendations are inadequate and require significant administrative changes to meet EPA guidance documents; these comments come from both RWQCB and EPA staff [e.g. National Semiconductor/Advanced Micro Devices (Arques)].
2. Finishing up the RI/FS and RAP, "holes" are found in the RI/FS and RAP that must be covered with further field work and/or investigations (e.g. Rhône-Poulenc's risk assessment and both HP sites).
3. New information comes to light (usually in the field, "one last well...") that requires radical changes to the RI/FS and RAP with their ensuing delays (e.g. the HP Palo Alto sites at earlier stages).

4. Agency and public comment require significant amendment of the FS/RAP (e.g. Rhône-Poulenc).

An additional factor that may delay RODs, but probably not the state RAPs is activity by the State Department of Health Services in the preparation of Health Assessments (HA) under contract for the Agency for Toxic Substances and Disease Registry (ATSDR) as required by CERCLA/ SARA. To date, it is still not clear what the significant differences are between ATSDR/DHS' Health Assessments and the Board's BPHE and Risk Assessments or how they will be involved in RAP/ROD decision-making since the HA will not normally be available until after the Board adopts a RAP. To date, no ROD has been knowingly held up because of ATSDR's HA.

Mitigating these potential delays is the fact that the Board has required interim remediation, the definition work has been mostly completed (exception, but nearing completion -- HP's 640 and 1501 Page Mill sites in Palo Alto; and NSC OU#2), and the Board can implement enforcement quickly where needed and necessary. Staff is aware of slippages and is working to assure completion to the amended schedule as well as preventing further slippage. At this time no enforcement is planned.

Internal over expenditures by site are primarily caused by several administrative problems:

- Within the tasks, CALSTARS reports utilized currently do not provide an appropriate breakout between indirect costs and contract costs.
- Within the task by site, over expenditures are caused by the implementation of specific site budgets where none existed before and unanticipated work or difficulty of work that could not be foreseen by the original budget. With the new award of June 1992, redirection corrected this problem (by task) as it stood then, but additional, unanticipated site work has caused some overexpenditures on some of the sites. For tracking purposes, the overall *total* grant budget must be utilized.
- The grant award was late due to delays in the submission and award; earlier over expenditures were covered by the July 1990

MSCA Tasks Status (cont.)

and May 1991 award budgets and were partially reconciled with the June 1992 grant award budget redirections. No additional overall funding is requested at this time, but additional redirections were made with the remaining partial award and will be needed again. A new workplan and budget was requested in December 1993. It is expected that redirections and a "clean-up" and reconciliation adjustment of the grant will be necessary in late CY 1994.

- To facilitate cost-recovery, all non-site specific work (Tasks A, B, etc.) is allocated monthly to the MSCA sites in proportion to the site activity for the month. Again, the real test of budget and spending at this time is to compare the *total* "bottom line".

Under expenditures are usually caused by changes in work, over estimation of work (usually anticipated problems do not appear), delays in site cleanup (staff work not able to be performed due to project delays and awaiting reports), and changing requirements (reducing significant assistance at the MEW sites).

The table on page III-6 is a summary of the grant budget status of all the sites and shows the approved budget and total accumulated expenditures for staffing, expenses and contracts during the quarter and the life of the Cooperative Agreement (Phase II) since initial award April 13, 1988, including the July 90, May 91, June 92 and July 93 awards. The Regional Board Program Manager may request a redirection between sites to cover overages in late 1994. No overall increase in total budget (other than approval of 1994-96 workplan) is foreseen due to these charges at this time (in fact a decrease in budget was proposed for FFY 93 and in future forecasted years).

Forecasted MSCA Tasks and Activities Next 3 - 6 Months:

--Significant activity is expected as shown in the MSCA Schedule (see page III-5) to completing RI/FS (HP 640 and 1501), implementing NSC's OU#2, and finalizing Rhône-Poulenc's Wetlands RI/FS Investigation including an Explanation of Significant Difference as the boundaries of the Uplands OU is modified) as well as some informal Public Meetings near sites to receive comment on various phases of projects.

--Maintain time schedules in Community Relations Plans in coordination with overall schedule, especially Hewlett-Packard sites.

--Amend and extend, if necessary, MSCA contracts and Interagency Agreement with DHS (Data Validation).

PROGRAM ELEMENT A: PROGRAM MANAGEMENT

The RWQCB is responsible for continued coordination and implementation of the South Bay MSCA Program. These activities include, but are not limited to, the following:

- *Maintaining the direction, scope, and quality of the South Bay Program*
- *Planning and oversight of the overall program schedule and budget*
- *Interagency coordination*
- *Staffing requirements and recruitment*
- *Supervision of Community Involvement*
- *Program analysis and development*
- *Supervision of procurement*

Product

The products for Task A are the successful completion of all the tasks identified and funded under this phase of the South Bay MSCA.

Additionally, most site-file cost-recovery work will be initially charged against this task with allocation among the sites made later depending upon the actual work necessary to establish and maintain individual site-specific cost files.

Within the overall program management, the most significant program management activities during this period involved the coordination / management necessary to meet MSCA time schedules, especially those for Rhône-Poulenc, Hexcel, and Hewlett-Packard(s); preparation of the new workplan to meet EPA budget restrictions; and day to day supervision and management of ongoing MSCA tasks at ROD adopted sites (i.e. ongoing RD/RA and O&M). Significant activity is still expected over the next three months in developing the 1994-1996 workplan and budget and implementing the supervising and implementing the SMS BBS .

State Budgeted Activities

Task A involves supervising and implementing specific tasks (i.e. contracts) included in the MSCA. There is no existing state-funded budget provided for this activity. All Task A funding is MSCA funded by site.

Costs

The expenditures for the quarter as well as the grant period through 31 December 1993 are combined with the other tasks and included in the Program Budget Table on page 6.

PROGRAM ELEMENT B: SITE MANAGEMENT SYSTEM

Task Description

Under the earlier and current MSCA agreements the RWQCB implemented a computerized system to track RI (site remedial investigation), FS (feasibility studies / alternatives evaluation), and the implementation of remedial action activities for use of the RWQCB, Cal/EPA-DTSC and EPA management personnel for use in site enforcement and task tracking.

Additionally, as part of the community involvement program the SMS has been distributed to 15 municipal agencies, 9 libraries, 7 state and federal agency representatives, 2 environmental groups, and 1 manufacturers group, as well as sold (for reproduction costs) to those desiring it (primarily consultants).

Products

No quarterly report was produced this quarter per the revisions approved in the January 1992 workplan. The Board has changed the SMS, at least in its present form. The 1992-93 workplan supports a significantly reduced SMS effort, at least for the "paper" portion. Regional Board implemented this "new" SMS in early 1993 utilizing a computer Bulletin Board format with a computer purchased in December 1992 utilizing MSCA funds. The BBS portion went on-line March 18, 1993. The yearly updated paper edition will be completed February 1994.

State Budgeted Activities

There is no existing State-funded budget or activities for the Site Management System.

Cost

Expenditures for Task B are included in the Program Costs Table on page 6.

PROGRAM ELEMENT D: COMMUNITY INVOLVEMENT

Task Description and Objectives

The main objectives of community involvement activities performed under the MSCA are:

Provide the general public with information on ground water systems, water supply sources, water quality, hazardous waste regulatory processes, and scope, progress and findings of remedial response activities.

Provide sufficient background information about technical and environmental issues to help the public understand and assess remedial actions.

Provide information, especially technical findings, in a form understandable to the general public.

Provide elected officials and the media with timely detailed information at key points throughout program activities.

Use the media as a major means of disseminating information to the general public.

Establish a two-way information exchange with environmental, public interest, and other concerned groups throughout the remedial response program.

Provide the means for all interested individuals to express concerns and make inquiries throughout project activities. (the opportunity for two-way communication is particularly important because of the length and complexity of the project).

Use the Groundwater Task Force, for overall coordination and review of community involvement efforts.

Create an interagency community involvement team to further coordinate the flow of information from agencies to the public.

Monitor public concerns and information needs

Modify the community involvement plan(s) to respond to changes in community attitudes and needs.

Community involvement activities conducted under the MSCA function independently, but coordinated with, EPA's area wide community involvement strategy as well as DHS's site community involvement programs. Specifically, the RWQCB will be responsible for providing information and directing community involvement activities for RWQCB-lead sites.

Community Involvement activities were significantly reduced beginning this quarter as the IGA staff on-loan from EPA returns to EPA and all Community Involvement work will be handled by Board staff. Losing the full-time staff is somewhat mitigated by the reduced workload with only several sites awaiting completion of RAP/RODs as well as significant planning to assure a satisfactory transition.

Products

Per earlier explanation, all Community Involvement activities are now combined into the project managers' tasks of site oversight.

Future Activities

Future activities are currently scheduled to meet the MSCA Special Conditions, especially for the sites awaiting final RAP/RODs.

Costs

All costs for Community Involvement are now included in the other tasks as part of the every day work. All Community Involvement work will now be performed by state employees. See the Table on page III-6 for overall grant budget status that includes Community Involvement costs by site.

PROGRAM ELEMENT E: TIER I ACTIVITIES

Tier I activities are those activities that occur at specific sites in the South Bay.

TASK E1.* IDENTIFICATION OF NEW
SITES

TASK E2. RWQCB OVERSIGHT OF
NPL PRP ACTIVITIES

TASK E1a.* SCREENING OF NEW SITES
IN ORDER TO CONDUCT
Pas ON MOST SENSITIVE
SITES

TASK E1b.* OVERSIGHT OF PRP SI

*Note: These tasks were not requested for funding in this Phase; they may be considered at a later time if conditions change.

TASK E2. RWQCB OVERSIGHT OF NPL PRP ACTIVITIES

Regional Board activities in this task cover the RI/FS oversight RD/RA and/or regulation underway at the 30 South Bay MSCA Superfund sites (31 companies/agencies either final and proposed including Liquid Gold and United Heckathorn in Richmond) for which the Board as a regulatory agency has either the current lead (21) or the supporting agency role (9). The current Agency-Lead and NPL Status as of this report are covered below.

EPA Lead Superfund Sites:

- *1. Fairchild Semiconductor Corp.,
464 Ellis St., Mountain View
- *2. Intel Corp., 365 E. Middlefield Rd.,
Mountain View
3. Jasco Chemical Company, 1710 Villa St.,
Mountain View
4. Lorentz Barrel and Drum, 1515 S. 10th St.,
San Jose
5. Moffett Naval Air Station, Sunnyvale
- *6. Raytheon Company, 350 Ellis St.,
Mountain View
7. United Heckathorn, Richmond
8. Westinghouse Electric Corporation, 401 E.
Hendy Ave., Sunnyvale

RWQCB Lead Superfund Sites:

- *1. Advanced Micro Devices, 901 Thompson
Pl, Bldg.901, Sunnyvale
2. Advanced Micro Devices, Bldg. 915., 915
Deguigne Dr., Sunnyvale
- *3. AMD-Arques, (formerly Monolithic
Memories, Inc.), 1165 East Arques Ave.,
Sunnyvale
4. Applied Materials, 3050 Bowers Avenue,
Santa Clara
5. CTS Printex, 1905-1931 Plymouth St.,
Mountain View
6. Fairchild Camera and Instrument Corp.,
Bernal Road, San Jose
7. Hewlett-Packard, 640 Page Mill Rd., Palo
Alto
8. Hewlett-Packard, 1501 Page Mill Rd., Palo
Alto
9. Intel Facility III, 2880 Northwestern
Parkway, Santa Clara
10. Intel Magnetics/MicroStorage, 3000
Oakmead Village Dr., Santa Clara
11. International Business Machines, Cottle
Road, San Jose
- *12. Intersil, Inc., and Siemens Components,
Inc., Cupertino
- *13. National Semiconductor, 2900
Semiconductor Dr., Santa Clara

14. Rhône-Poulenc/Sandoz, 1990 Bay Road,
East Palo Alto
- *15. Signetics, 811 E. Arques, Sunnyvale
16. Solvent Services, 1022 Berreyessa Road,
San Jose
- *17. Spectra-Physics, Inc., 1250 West
Middlefield Road, Mountain View
18. Synertek #1, Santa Clara
- *19. Teledyne Semiconductor, 1300 Terra Bella
Ave., Mountain View
- *20. TRW Inc., 825 Stewart Pl., Sunnyvale
21. Van Waters & Rogers, Inc., 2256 Junction
Ave., San Jose

* above sites will be treated as part of a
combined site, at least for off-site work.

Cal/EPA-DTSC Lead Superfund Sites:

1. Liquid Gold, Richmond

EPA NPL Modifications (RCRA "drop" sites):

EPA's proposed rule-making in June 1988, (NPL Update #7) recommended that 6 NPL sites be deleted from the NPL since they are RCRA sites. Two other RCRA sites were proposed to be retained on the NPL. RWQCB officially commented to EPA-HQ on this proposal to delete high-priority RCRA sites by questioning the timeliness of the RCRA regulation update, future MSCA funding for these CERCLA/RCRA sites, and the lack of Technical Assistance Grants to citizen groups for RCRA (only) sites. EPA-IX has stated that the RCRA sites (proposed deleted and those remaining) will be treated as NPL sites to assure attention to cleanup appropriate to their NCP HRS scoring.

On October 4, 1989, EPA announced its final rule on the dropping of some of the NPL sites that are also RCRA sites. Under this rule, the following sites have been dropped from the NPL:

Hewlett-Packard, 1501 Page Mill Road
IBM, San Jose
Rhône Poulenc/Sandoz, East Palo Alto
Signetics, Sunnyvale
Van Waters and Rogers, San Jose

EPA and the Board, per policy, continue to treat the RCRA "drop" sites the same as NPL sites in terms of requirements, tasks, and cleanup, although this policy is under consideration for changes as this report is being written.

Task E2 - Site Oversight (cont.)

Products during Reporting Period:

Regional Board actions / Orders affecting the South Bay MSCA:

October: None

November: MSC/INTEL SCR amended

December: None

South Bay MSCA Superfund Site Cleanup Decisions (Remedial Investigations/Feasibility Studies/Remedial Action Plan): All the South Bay Superfund sites have performed significant amounts of work to meet Superfund final cleanup decision requirements. The tasks remaining are necessary to meet State and Federal Superfund (almost all of which the State requires as well) requirements to determine the best alternative cleanup plan considering protection of public health and the environment as well as the maintenance (i.e. high quality groundwater) and protection of the resource (i.e. water conservation and reclamation).

Board staff conducted the following tasks as detailed in the EPA OSWER Memorandum dated October 1, 1986, entitled, "CERCLA Funding of Oversight of Potentially Responsible Parties by States at National Priority List Sites."

Review Tasks (all sites):

- Reviewed and commented on scope of work and work plans (all work plans requested and approved as of August 1990; updating due to operable units still may be necessary)
- Reviewed and commented on updates to Safety Plans
- Reviewed and Commented on drafts of portions of RI reports (all)
- Reviewed/discussed FS objectives
- Completed PRP reports (all)
- Organized and participated in technical meetings on the RI/FS with PRPs, PRP contractors, and/or EPA. (all)
- Provided Technical Support to the Community Relations Task for:
 - Briefing of local and state officials
 - Prepared fact sheets and press releases

Field Related Tasks:

- On-site presence/inspection as necessary (all)

In addition, at RWQCB lead sites the following tasks were in progress by RWQCB staff or contracted by the RWQCB:

- Data Validation (all by IAG with DHS)
- Public Health Baseline Evaluation
 - (all work other than by PRP is by EPA or by contract award to ICF/Clement for both BPHE, BPHE review, and RI/FS review)
- Maintenance of the Administrative Record
 - (primary use of PRPs for initial preparation)
- Continue Implementation of Cost Recovery (all)

For those sites where the RWQCB is the Support Agency, staff provided support in the tasks described above to the extent necessary but not to exceed the staffing levels previously approved (exceptions are noted in the Board's letter and memorandums of February 9, and May 3, 1993, respectively, requesting budget redirections and reductions for final FFY 93 award). Sites primarily affected: MEW, Lorentz, United Heckathorn, Westinghouse, JASCO, Liquid Gold.

For those sites under Regional Board lead, the IBM, Fairchild San Jose, Applied Materials, Intel SCIII, Intersil/Siemens, Solvent Services, AMD 901/902, AMD 915, AMD Arques, CTS Printex, National Semiconductor OU#1, Microstorage/Intel Magnetics, Signetics, Rhône-Poulenc/Sandoz (Uplands OU), TRW/FEI Microwave, Teledyne, Spectra-Physics, Synertek #1, Van Waters & Rogers, and Hexcel (now delisted), sites have completed the RI/FS and RAP and a ROD have been signed in this MSCA grant phase (See Table, Page III-5).

Costs and Budgets: Even with the addition of the latest grant awards and the budget redirection among sites, some **site specific** over- and under-expenditures are occurring. While no new grant funds will be required, proposed redirection among sites in the July 30, 1993, award have been made, and it now appears that further redirection will be necessary late CY 1994.

The following is a description of the MSCA funded staff work and the current status at each of the MSCA Superfund sites.

REGIONAL BOARD LEAD SUPERFUND SITES:

ADVANCED MICRO DEVICES 901-902, SIGNETICS, TRW (FEI) MICROWAVE (THE COMPANIES)

The Final Remedial Action Plan (RAP) for the site was adopted by the Board in June 1991.

AMD OPERABLE UNIT

The groundwater monitor report for the AMD operable unit was submitted in December 1993. The eight-well extraction system pumped an estimated 2.5 million gallons during this quarter. As expected, the majority of this water was extracted from the B1 and B2 water-bearing zones.

A summary of contaminant removal and extraction system operation for this quarter was included in the report. Based on average contaminant concentrations, the system removed about 12.1 pounds of VOCs during the quarter for a total of 496 pounds removed since the project began in 1984.

SIGNETICS OPERABLE UNIT

The progress and monitoring report for this quarter at the Signetics operable unit was submitted in January 1994. The extraction system removed more than 11 million gallons of water during this quarter. The average extraction was 89 gallons per minute. The majority of the water extracted is attributable to the B-zone extraction wells and the 440 Wolfe building sump. However, the majority of contaminant removal is attributable to the B-zone extraction wells since contaminant concentration is lower in the water captured by the building sump.

The treatment system was in compliance with NPDES requirements. Groundwater pumping resulted in an estimated removal of 309 pounds of TCE during this quarter. The groundwater extraction systems have removed more than 18,000 pounds of TCE since 1987. The soil vapor extraction system removed 7.0 pounds of VOCs during this quarter. The vapor extraction system has removed a cumulative 715 pounds of VOCs since its inception in 1988.

TRW OPERABLE UNIT

The progress and monitoring report for this quarter at the TRW operable unit was submitted in January 1994. The treatment system operated throughout the quarter with minimal down-time.

No significant changes in contaminant concentration or distribution were reported for the quarter. The average extraction rate for the seven extraction points was 22 gallons per minute during the quarter for a total of 2.8 million gallons. The total VOC removal for this quarter is estimated to be over 53 pounds of VOCs.

OFFSITE OPERABLE UNIT

The progress and monitoring report for this quarter for the Offsite operable unit was submitted in January 1994. The extraction system removed approximately 17 million gallons of water during the quarter. The estimated removal of VOCs for this quarter is 117 pounds. The cumulative removal of VOCs is estimated at over 4800 pounds since 1988.

REGULATORY EVENTS THIS QUARTER

None

PROJECTED EVENTS FOR NEXT QUARTER

Quarterly monitoring of the remediation activities at the site will continue through the next reporting period.

ADVANCED MICRO DEVICES, BUILDING 915, 915 DEGUIGNE DRIVE, SUNNYVALE, SANTA CLARA COUNTY

The Final Remedial Action Plan (RAP) for the site was adopted by the Board in June 1991.

ACTIVITIES THIS QUARTER

The fourth quarter monitoring report was submitted in December 1993. As in previous quarters, almost half of the A-zone wells were dry at the time quarterly samples were collected. As a result, groundwater extracted at the site is

Task E2 - Site Oversight (cont.)

produced primarily by the B-aquifer. Approximately 8.4 million gallons of groundwater was extracted during this quarter.

The estimate of total VOCs removed since 1984 by groundwater extraction is 4046 pounds with 42 pounds removed during this quarter.

The contaminant plume had been detected in the two downgradient monitoring wells located off-site to the north (MW-44, MW-45). Extraction well EW-9 is now operational and is expected to capture the plume and control further migration from the site. A report was submitted in December evaluating the performance of this extraction well. Based upon groundwater elevations and a computer model of the site, the well appears to be adequately containing migration of the plume.

REGULATORY EVENTS THIS QUARTER

None

PROJECTED EVENTS FOR NEXT QUARTER

Quarterly reports documenting progress will be submitted throughout 1994. The impact of upgradient sources on the AMD 915 system will continue to be monitored. Documentation of the effectiveness of the additional extraction well will be included in each quarterly report.

APPLIED MATERIALS, INC. BUILDING 1, 3050 BOWERS AVENUE, SANTA CLARA

Site Activity/Accomplishments

1. Monthly reports (NPDES) are being submitted as required. There were no reported discharge violations. The discharger did notify the Board as required that the air stripper was shut down at 5:00 PM on 02/01/94 because of a leaking pump in the treatment unit. The leak was repaired and the system restarted at 3:00 PM on 02/02/94.
2. Applied Materials submitted the periodic self-monitoring report for the period June-September 1993.
3. The discharger has reported that the installation of two valves to control runoff to the city storm drains has been

completed, but that the installation of all electronic controls for the valves has not yet been completed and is continuing.

4. The discharger has reported plans to replace the superstructure of the air stripper in the very near future. This will require temporary shutdown of the extraction and treatment systems. After the equipment replacement has been completed and tested, the discharger will submit an addendum to the O & M Plan for the air stripper.
5. The discharger is in the process of transferring all R & D and manufacturing activities out of Building 1.

Agency (Board) Activity/Events

1. Board staff reviewed the monthly reports and the self-monitoring report and commented as appropriate.
2. The annual site inspection was made on January 6, 1994. The site was in compliance with requirements of Board Orders. Results of sample analysis showed that concentrations of VOCs in groundwater from the A2 zone (well AM1-10) were still high.

Future Activities

During the next quarter (January-March 1994) staff expects the discharger to complete replacement of the air stripper superstructure and submit an updated air stripper O & M Plan, and required periodic reports.

CTS PRINTEX, 1905, 1911, 1921, and 1931 Plymouth Street, Mountain View

CURRENT STATUS:

On January 15, 1994, CTS submitted the fourth quarter/annual monitoring report. This report included an evaluation of the progress of cleanup, and a proposal to reduce groundwater extraction.

Monitoring wells east of Highway 101 have been below MCLs since June 1987. Further, based on upgradient groundwater sampling conducted around the area of Old Middlefield Road last summer, CTS now believes that the area

Task E2 - Site Oversight (cont.)

designated as the western portion of their plume is not part of the CTS plume. They believe their hydraulic containment system controls the migration of the eastern plume, and that the western plume is distinct and not associated with the CTS site. CTS requested that the Regional Board evaluate this scenario, with possible proposal to limit the extraction system to the western plume. Regional Board staff will carefully evaluate this latest report, and plan to meet with CTS on February 25, 1994 to discuss the issues.

Groundwater extraction systems continued operation and the report indicated there was no significant change in the water table from the previous quarter. Chemical concentrations also showed no appreciable changes from the previous quarter.

PROJECTED ACTIVITIES FOR NEXT SIX MONTHS:

No new tasks are required; groundwater extraction and monitoring will continue. Staff will meet with CTS on February 25, 1994 to discuss proposal to reduce extraction system.

FAIRCHILD, SAN JOSE

The final Remedial Action Plan (RAP) was adopted by the Regional Board in January 1989. The RAP set cleanup standards for on-site groundwaters at MCLs and for off-site groundwaters at less than one fourth the MCLs. In order to help meet these cleanup standards, soil cleanup goals were set for the on-site area, which is surrounded by a slurry wall. The Regional Board amended the RAP in May 1990 in response to soil-cleanup issues raised during an appeal. This modification allowed Fairchild to demonstrate that its prior soil cleanup was sufficient to protect groundwater.

Fairchild proposed a one-year shut-down of the off-site extraction wells in September 1991. Board staff approved the proposal in December 1991. The proposal is based on computer modeling which shows that groundwater pumping is ineffective in speeding up remediation of the aquifers at this site; the model predicts that off-site cleanup will take 15 years, whether or not off-site pumping occurs.

During the last quarter, Fairchild operated the on-site extraction system continuously at a rate of 50 to 85 gpm, discharging the treated

groundwater to the storm drain. This is consistent with the cyclic pumping plan cited above. This pumping strategy represents a change in the cyclic pumping from prior quarters. The change was made to maintain groundwater elevations inside the slurry wall in the face of rising off-site groundwater elevations.

The off-site extraction wells were shut down as part of the approved demonstration project. The no-pumping program will continue pending Board evaluation of the 5-year review (see below). During this quarter, VOC concentrations did not increase or migrate, consistent with modelling results and prior sampling results.

In November, Fairchild proposed several modifications to on-site remediation facilities to accommodate proposed redevelopment activities at the site. Modifications include: closing the SVE system, relocating the treatment unit, and closing several unused wells. Board staff approved the proposal with conditions.

In December, Fairchild submitted a five-year review as required by its 1989 order. The review concludes that the selected remedy is working and should be continued; it concludes that off-site extraction should be suspended for another five years based on model validation.

During the next six months, Fairchild will continue on-site groundwater extraction on a continuous basis (85 to 120 gpm) in order to keep the A-aquifer unsaturated. Fairchild will submit a re-evaluation of reuse options in February, as required by Board staff. Board staff conducted an NPDES permit compliance inspection on February 4.

In March, the Board will consider the five-year reviews by Fairchild and IBM as a status report. No changes in Fairchild's Board order are anticipated.

**HEWLETT-PACKARD, 640 Page Mill Road,
Palo Alto**

CURRENT STATUS:

An RI/FS was submitted on April 1, 1991 for on-site and off-site in the California, Olive and Emerson Streets (COE) area. Board staff found the RI/FS incomplete due to the discovery of a more complex hydrogeologic environment than first predicted. Additional data that was required

Task E2 - Site Oversight (cont.)

to resubmit the RI/FS has been gathered in the area east of Matadero Creek. This data has resulted in complete definition of the vertical and lateral extent of the off-site plume. The final Baseline Public Health Evaluation (BPHE) was completed in September 1992 by EPA's consultant, Clement International, for the on- and off-site areas. The RI for the on-site and COE areas was submitted in June 1993 and the FS for these areas was submitted in August 1993. Both have been commented on by Board staff and are currently being revised by HP. Construction of the new office building at the 640 Page Mill Road site is under way. The vapor and groundwater extraction wells that will operate under the building have been completed and will be hooked up to the main treatment systems when the building is completed.

Twelve off-site and on-site groundwater extraction wells have been installed as part of the Interim Remedial Measure program at the site. These wells have not yet been connected to a treatment system. Despite access problems, work is progressing to complete the off-site treatment system by March 15, 1994.

FUTURE ACTIVITIES

Conveyance piping to connect the approved off-site extraction wells is currently being installed. Additional groundwater extraction wells will be required in the future. The RI/FS is scheduled to be completed in April. A proposed plan for cleanup will be available to the public in June. Draft Site Cleanup Requirements are also scheduled to be available to the public in June, with final adoption scheduled for August 1994.

HEWLETT-PACKARD, 1501 Page Mill Road, Palo Alto

CURRENT STATUS:

Site Cleanup Requirements were adopted in 1991 and updated in August 1993, establishing RI/FS tasks and schedules. The RI/FS was originally due in June of 1991. HP submitted a revised RI in April 1992. Board staff have reviewed the RI, and made comments to HP in December 1992. Due to the discoveries of additional chemical plumes and due to the need for further definition of the known plumes, the updated Order required submittal of a revised RI/FS by January 17, 1994. The RI/FS was submitted on time and is under review by Board staff. The final

Baseline Public Health Evaluation (BPHE) has been approved after examination by EPA and Board staff.

The site currently has six interim remedial measure extraction wells in operation. The most recent three extraction wells help capture the area of the northwest TCE plume with the highest chemical concentrations. The plume is well defined off-site but still needs a few edge defining wells on-site.

FUTURE ACTIVITIES:

Additional off-site work for extraction wells and access issues continues. The proposed plan for final cleanup is due in April and the fact sheet informing the public is scheduled to be distributed in June. Draft Site Cleanup Requirements will be released in June, with final adoption scheduled for August 1994.

HEXCEL CORPORATION, Livermore, Alameda County

No longer part of MSCA

INTEL, SANTA CLARA III, Santa Clara

The Final RAP for the site was adopted by the Board in July 1990. Intel submitted a report titled "Cyclic Pumping Demonstration Project, Evaluation and Evaluation Recommendations for Further Actions" in late 1991. Cyclic pumping (also known as pulsed pumping) is believed to be a method for improving groundwater remediation efficiencies.

Based on this October 1991 report, Intel has tried both 60-day on/60-day off and 120-day on/120-day off pumping cycles. Intel has submitted effectiveness reports on these cycles that conclude that these pumping cycles are no more efficient than continuous pumping. In response to requests by Board staff, Intel proposed a new demonstration project involving various cyclic pumping schemes that began on January 15, 1993. These additional pumping trials did not show any significant improvement over the previous trials or continuous pumping. After meeting with Intel to discuss the latest cyclic pumping results, Board staff has approved Intel's request for a twelve month trial period with all pumps off. During this trial, monitoring wells will be sampled quarterly to determine if there is any plume migration or concentration

Task E2 - Site Oversight (cont.)

changes. This trial began in the fourth quarter 1993.

Board staff will continue to monitor the site and review quarterly reports submitted by Intel.

INTERNATIONAL BUSINESS MACHINES, San Jose

The final Remedial Action Plan (RAP) was adopted by the Regional Board in October 1988. It set cleanup standards similar to those for Fairchild (San Jose) and included soil vapor extraction (on-site) and continued groundwater extraction (on and off-site). IBM's cleanup program is strongly affected by groundwater elevations, which vary dramatically depending on rainfall as well as recharge by the Santa Clara Valley Water District.

During the last quarter, IBM continued implementation of the RAP. IBM extracted and treated about 95 million gallons of groundwater for the quarter, reusing about 75 million gallons (or 80%) of this total volume. All on-site extracted groundwater was reused, by reinjection, landscape irrigation, or as feed water for industrial use. Most off-site groundwater was discharged to Canoas Creek. The soil vapor extraction system continued to be effective, removing over 1,000 pounds of VOCs and hydrocarbons from on-site soils during the quarter.

In October, IBM submitted a five-year review as required by its 1988 order. The review concludes that the selected remedy is working and should be continued; it concludes that off-site pumping reductions should be continued based on favorable results to date.

During the next six months, IBM will continue its cleanup program. Efforts to reuse off-site extracted groundwater will be postponed, pending a determination of the optimal pumping rate. (In January 1994, IBM proposed idling the SVE system at Building 004, based on attainment of curtailment criteria and soil cleanup standards.) Board staff conducted an NPDES permit compliance inspection on February 4.

In March, the Board will consider the five-year reviews by Fairchild and IBM as a status report. No changes in IBM's Board order are anticipated.

MICRO STORAGE/INTEL MAGNETICS, Santa Clara

The Final Remedial Action Plan (RAP) for the site was adopted by the Board in July 1991.

Draft deed restrictions to prohibit the use of the shallow groundwater at the site have been submitted by the two property owners. Kim Camp III's deed restriction has been signed by the Executive Officer and returned to Kim Camp III to be recorded with Santa Clara County.

Intel (on behalf of the property owner, 3000 Oakmead Village Drive Ltd.) submitted its most recent revised deed restriction in the second quarter 1993. Board legal staff is currently trying to resolve a remaining point of disagreement with Intel.

The Regional Board has approved staff's recommendation that Boehringer Ingelheim (BI) and International Diagnostic Technologies (IDT), be added to the RAP. This recommendation is based on a review of the site's groundwater quality, groundwater flow, and other hydrogeologic data, which indicated that a release of solvents to groundwater had taken place during International Diagnostic Technologies' (IDT's) tenancy at the site. BI was the parent company of IDT during the time IDT was a tenant at the site. The Board adopted an amendment to the final RAP in November 1993 naming IDT and BI as additional primary responsible parties. BI has appealed the amendment to the State Board.

Currently, approximately 11,000 gallons per day of groundwater is extracted and treated to remove volatile organic chemicals. Board staff will continue to monitor the site and review quarterly reports submitted by the PRPs.

NATIONAL SEMICONDUCTOR CORPORATION & ADVANCED MICRO DEVICES (1165 ARQUES, formerly Monolithic Memories), Sunnyvale / Santa Clara

At the NSC and AMD sites, work completed and work projected is pursuant to the final Remedial Action Plan (RAP) adopted by the Board at its September 1991 meeting. The RAP contains compliance tasks and time schedules for the remediation of soil and groundwater in Operable Unit 1, which consists of the NSC and AMD

Task E2 - Site Oversight (cont.)

facilities and the downgradient commingled plume area.

Orders for Site Cleanup Requirements for the OU2 sites (located east of the AMD and NSC sites) were adopted in the October Board meeting. The Orders require further investigation at the 999 Arques Corporation site, the Inprint/Sobrato Development site, and the CAE-Link Corporation site. In addition, a tentative order for modification of the final remedial plan for the NSC site was circulated in December. This tentative order provides for expansion of the area which NSC is required to investigate and remediate. This expansion is needed because the release at the former United Technologies Corporation site (for which NSC has taken cleanup responsibilities) appears to be impacting areas to the north, outside the current OU1 boundary.

Once investigations for OU2 sites and the expanded area of OU1 are complete, staff will be able to better determine whether modifications are necessary to the Operable Unit 1 and 2 boundaries, and to the responsible parties named in the Operable Units.

National Semiconductor

Additional soil samples were obtained in order to further characterize contamination at source areas at the NSC site. As of December, soil vapor extraction wells are currently being installed in 7 of the 12 contaminant source areas, and pilot tests were conducted in nine of the areas. Extraction of VOCs at one source area has declined from 13 to 1.9 pounds per day. The total mass of VOCs removed from this source area since it started up in the 3rd quarter of 1993 is approximately 349 pounds.

The groundwater treatment system has continued to operate in compliance with the NPDES permit. During the 4th quarter of 1993, the groundwater treatment system extracted approximately 266 gallons per minute, and removed a total of 178 pounds of VOCs.

Advanced Micro Devices - Arques site

The soil vapor extraction system continued operation, removing a total of 102 pounds of VOCs during the fourth quarter of 1994. The total amount of VOC vapor extracted from the soil to date is 415 pounds. AMD is currently

evaluating effectiveness of soil remediation to date in order to determine the feasibility of meeting the 5 year cleanup deadline for soil. Alternative cleanup goals for PNAs are also being evaluated.

Groundwater monitoring reports and NPDES monitoring reports for the fourth quarter of 1994 have been submitted and reviewed. Groundwater continues to be extracted from a network of on-site wells and treated. During the fourth quarter 1993, the system extracted approximately 27 gallons per minute and removed a total of 10.5 pounds of VOCs. No violations of NPDES permit requirements were noted.

RHONE-POULENC/SANDOZ, East Palo Alto

Activities During September-December

The Regional Board staff have coordinated agency discharger meetings and conference calls regarding statistical approaches to interpretation of data collected for the Ecological Assessment of the Wetlands Operable Unit. The statistical approach has been finalized and the discharger has submitted the finalized statistics for arsenic. They are currently running the final statistic for all other metals of concern.

The final draft deed restriction for the 1990 Bay Road property has been finalized and submitted for signatures.

Board staff have met with and discussed with interested agencies to resolve their issues in the readjustment of the boundaries of the Upland OU to include the Torres and Pacific Gas & Electric properties which are currently in the Wetland OU. This would allow these properties to be remediated before the remainder of the Wetland OU, which at this point will probably be in 1996 and 1997.

Activities Anticipated During January-March

Board staff will draft a Tentative Order (TO) which shall be the equivalent to an Explanation of Significant Difference (ESD) to amend the boundaries of the Upland OU to include portions of the Wetland OU. A draft of this TO shall be brought before the Board in February for an initial public hearing and will be brought back before the Board in March for final consideration. In addition, a newspaper ad shall

Task E2 - Site Oversight (cont.)

be published and fact sheet produced and mailed to the community which explains the ESD. Board staff are considering having a public meeting in East Palo Alto to discuss the ESD and to explain the status of the Ecological Assessment. Staff will meet with local government officials to discuss the need for such a meeting and to bring them up to date on events. Staff shall also try and meet with all agencies after they have received a draft of the TO discuss any further concerns they may have.

A workplan to develop a mitigation plan for the loss of wetlands which will occur by implementation of the ESD will be reviewed by Board staff in cooperation with USFWS. Board staff will encourage other agencies to comment in a timely manner on this plan.

**SIEMENS COMPONENTS INC., 19000
Homestead Road, Cupertino; INTERSIL INC.,
10900 N. Tantau Road, Cupertino**

CURRENT STATUS:

The final Remedial Action Plan for this site was adopted by the Regional Board in August 1990, and EPA issued a concurring ROD. The RAP called for additional groundwater extraction wells and soil vapor extraction wells. All work needed to implement the RAP has been completed. Intersil has 7 groundwater extraction wells; Intersil's SVE system has been removed. Siemens has 10 soil vapor wells and 18 groundwater wells; and offsite there are 3 extraction wells. The final off-site groundwater extraction system as proposed in the RAP has been completed.

In April 1992, Siemens/Intersil requested permission to close four deep-aquifer monitoring wells off-site, in order to avoid possible damage due to construction activities. Board staff approved the request on June 4, 1992, given that no VOCs were detected in these wells. Shortly afterward, the City of Santa Clara reported PCE concentrations slightly over drinking water standards in a down-gradient public well. Continued monitoring has confirmed the presence of PCE in the Santa Clara Well #24. The source is not believed to be Siemens/Intersil. The four deep-aquifer monitoring wells are still in existence, the Santa Clara Valley Water District has taken ownership and responsibility of these wells.

During the last quarter, monitoring and remediation continued as required by the RAP. Both Intersil and Siemens requested revisions to their Self-Monitoring Program for the On-Site Areas. These requests have been approved by Board staff. Siemens will be conducting "phased" soil vapor extraction at some of the vapor extraction wells to optimize system efficiency.

On January 3rd Siemens discovered that the groundwater treatment system effluent contained TCE above cleanup levels. They confirmed the results by taking a second sample on January 4th. As a result the groundwater treatment system was shut down temporarily until corrective actions could be implemented. The cause of failure was due to scale buildup in the stripper towers. The air strippers were acid-washed and the system was back on line approximately a week later.

FUTURE ACTIVITIES:

American Microsystems, Inc. (AMI), an adjacent facility, is installing an off-site groundwater extraction and treatment system. System start up is a few weeks behind schedule because of delays with power hook up. The system is scheduled for startup the first week of February.

Monitoring and remediation will continue.

**SOLVENT SERVICE INC. (SSI), 1021
Berryessa Road, San Jose, Santa Clara County**

The Final Remedial Action Plan (RAP) for the site was adopted by the Board in August 1990.

ACTIVITIES THIS QUARTER

Operation of the groundwater extraction and treatment systems continued throughout the quarter. The steam enhanced vapor extraction system (SIVE) has been restarted after being temporarily removed from operation to allow final installation of the cap on the site, as part of other construction activities on the site. The vapor extraction wells were drilled out and rehabilitated to increase the efficiency of the system.

REGULATORY EVENTS THIS QUARTER

None

Task E2 - Site Oversight (cont.)

PROJECTED EVENTS FOR NEXT QUARTER

Quarterly monitoring reports will be submitted within thirty days of the end of each calendar quarter.

A vapor extraction system has been installed on the western property boundary to address the free-phase petroleum plume originating from the Chevron Fuel Terminal across Berryessa Road.

UNRESOLVED ISSUES:

The status of remediation of dissolved phase hydrocarbons, and solvents on the western property boundary must be resolved following the completion of removal of free product hydrocarbon from this area.

SYNERTEK #1, Santa Clara

The Final RAP for the site was adopted by the Board in March 1991. Operation of the B zone groundwater reinjection system commenced in December 1991. The reinjection system consisted of two extraction wells pumping a combined total of six gallons per minute (gpm) and one reinjection well reinjecting six gpm. The four A zone extraction wells continue to pump at a combined rate of about 12 gpm.

The six month hydraulic control study originally due in August 1992 was delayed due to reinjection system failure as a result of calcium carbonate precipitation and system clogging. The study, rescheduled for completion in April 1993, was further delayed. Due to unresolvable problems with clogging, Honeywell, as owner of Synertek, submitted a request that the reinjection program and hydraulic control study be discontinued. Board staff reviewed and approved the request in the third quarter 1993.

Groundwater extraction and treatment continues as an integral part of the final remedial action at the site. Currently, approximately 26,000 gallons per day of groundwater is extracted and treated to remove volatile organic chemicals. Board staff will continue to monitor the site and review quarterly reports submitted by Honeywell.

TELEDYNE SEMICONDUCTOR, 1300 Terra Bella Ave., Mountain View; SPECTRA-PHYSICS INC., 1250 West Middlefield Road, Mountain View

CURRENT STATUS:

In February of 1991 the Board adopted a final Remedial Action Plan and EPA issued a record of decision. The RAP calls for groundwater extraction off-site and at the Teledyne facility. The RAP also requires additional soil treatment at the Spectra Physics facility.

During the last quarter, on-site work at Teledyne included the continuation of groundwater monitoring, effluent monitoring, extraction and treatment. On-site at Spectra-Physics, soil vapor extraction continued.

Teledyne sold Teledyne Components (formerly Teledyne Semiconductors) located at 1300 Terra Bella to TELCOM Semiconductors, Inc. Teledyne continues to own the property and the building which was previously occupied by Teledyne Components and is now leased to TELCOM.

Spectra-Physics proposed a workplan to conduct additional soil investigation as a result of the two year evaluation of their soil remediation system. The workplan was conditionally approved by Board staff. SP also proposed a workplan for curtailment of the SVE systems north and south of building 3. Further action on this proposal is pending the results of the soil investigation. Zappettini Investment Company which owns some of the SP sites and some of the adjacent sites has expressed interest in what SP is doing. They believe that the investigation conducted to date by SP is incomplete. Investigation proposed by SP as a result of the two year evaluation should address most of their concerns.

Off-site, Teledyne and Spectra-Physics monitor wells and extraction systems north and south of the Bayshore Freeway. TS/SP proposed to reduce their monitoring schedule. The plan was approved by Board staff.

Teledyne and Spectra-Physics submitted a petition in February 1993 requesting their final Site Cleanup Requirements be revised to alter their responsibility in four North Bayshore source areas. This issue was brought before the Board at the March and the May 1993 meetings. At the

Task E2 - Site Oversight (cont.)

May meeting, the Board directed staff to amend the 1991 Joint Order to include dischargers in the North Bayshore area. Board staff will investigate the North Bayshore sites further, and will amend the 1991 Joint Order to include an NBAR and/or dischargers in the North Bayshore area, contingent upon the findings of the investigation.

Off-site work includes investigation/remediation activities at Montwood, Santa Clara County Transportation Agency, and 1098 Alta Avenue. The Space Park Way site is the only site that requires initial investigation.

1098 Alta submitted a workplan to conduct investigation to determine the impact of upgradient releases to their site. The workplan was conditionally approved by the Board staff. The report is due by March 15, 1994.

Board staff have required no further investigation at the former Coastsides Nursery property. Although VOCs were found in groundwater on the site, staff believe the contamination is coming from upgradient sources such as the Santa Clara County Transit Agency, Teledyne/Spectra-Physics, or currently unknown sources.

Quarterly ground water monitoring continues at the Santa Clara County Transportation Agency, North Coach Division, and ground water remediation began in October 1992. An ACL was issued in January 1994 to this site, for illegal discharge of contaminated groundwater to the storm sewer.

Initial Site Cleanup Requirements were issued in January 1993 to the previous owners of the former Montwood site. Montwood has been working on source investigation and interim remediation. On-site and off-site investigation is completed for the most parts. Montwood is planning to startup the groundwater remediation system by April 15, 1994. The soil investigation conducted in the southwestern portion of the site in August of 93, did not locate the source in soil. They suspect the source may be under the building. They conclude that no soil remediation is feasible in the southwestern portion of the site.

Owners/Occupants of the Space Park Way facilities were requested to define their past chemical usage. At this time 3 parcels have been identified as potential sources of contamination. 2 sites have been requested to conduct investigation because of their locations with

respect to the plume and other sites. CWC §13267 letters were sent to the 5 sites as follows: 1625 N. Shoreline, 1675 N. Shoreline, 1280 Space Park Way, 1599 & 1601 N. Shoreline. Teledyne has volunteered to conduct the investigation on all sites except the 1280 SPW site. This site is not of interest to TD/SP. Some kind of response from SPW owners is expected by mid March.

Quarterly groundwater monitoring continues at Whisman School District.

FUTURE ACTIVITIES

Regional Board may need to use enforcement orders to provoke some more investigation and remediation in the North bayshore area. Regional Board staff will continue investigating the North Bayshore area to determine the extent of other sites contribution to groundwater contamination in the area, and will work towards bringing these dischargers under an order (Joint or Individual). The landfill will be going through closure activities in the near future; this may have some impact on off-site activities.

**VAN WATERS & ROGERS, INC, 2256
Junction Avenue, San Jose**

CURRENT STATUS:

On November 19, 1993, Regional Board staff performed an inspection of the groundwater and soil vapor extraction and treatment systems. The groundwater treatment system utilizes air stripping for water from the A aquifer, and a resin absorption system (*Amborsorb*) for water from the B-1 zone. After a hazardous waste compliance inspection, CalEPA-DTSC has begun evaluating whether or not the *Amborsorb* groundwater treatment system requires a hazardous waste permit for treatment. The SVE system utilizes carbon absorption currently, but a pilot study is being conducted to determine if *Amborsorb* could be used instead.

The expanded groundwater extraction system started up on July 19, 1993, and has been implementing a phased inclusion of extraction wells to refine the capture zone. In November and December 1993, the B-1 zone wells were non-operational due to mechanical problems in October with the treatment system for B zone groundwater. Apparently, a screen (and backup screen) containing the *Amborsorb* failed, and

Task E2 - Site Oversight (cont.)

material was discharged to the storm sewer. VW&R estimates that .5 pound of VOCs were discharged with the *Ambersorb* material. They submitted a report on December 1, 1993 describing the incident and how the situation will be remedied. Regional Board staff may recommend enforcement action.

The fourth quarter 1993 groundwater status report was received February 1, 1994. Water table elevations in the A-aquifer decreased from the previous quarter from .24 foot to 2.65 feet in the monitoring wells, and from 4.09 feet to 16.83 feet in the extraction wells. VW&R attributes this decrease to decreased precipitation and increased flow rates of the extraction wells. Water levels in B wells generally increased less than 1 foot. VOC concentrations remained similar to the previous

quarter in most wells, however, in some A zone monitoring wells, the concentrations fluctuated dramatically. Concentrations of primarily 1,2-DCE, 1,1-DCA, and 1,1-DCE increased two or three orders of magnitude in wells in hot spot areas, and in other hot spot areas, decreased similarly.

PROJECTED ACTIVITIES FOR NEXT SIX MONTHS:

Regional Board staff will pursue status of restarting B zone extraction and possible enforcement action for violating the NPDES permit. No new tasks are required; groundwater monitoring continues.

US EPA and CAL/EPA - DTSC LEAD SITES: (RWQCB is the support agency)

JASCO, Mountain View

EPA issued the ROD for this site in September 1992; the cleanup plan calls for expanded groundwater extraction, treatment prior to POTW discharger, deed restriction prohibiting wells in shallow groundwater, and ex-situ bioremediation of soils. EPA issued an administrative order for Remedial Design/Remedial Action in December 1992. Jasco has requested EPA approval to pilot-test an alternative approach: air sparging and soil vapor extraction.

During the last quarter, cleanup activities continued at this site, including interim groundwater extraction with POTW discharge. EPA staff approved pilot testing requested by Jasco but have not formally authorized a change in the remedy.

During the next six months, Jasco will implement pilot testing of air sparging and soil vapor extraction. EPA staff will continue reviewing Jasco design documents.

LIQUID GOLD, 580 Fwy near Hoffman Marsh, Richmond, Contra Costa County

CURRENT STATUS:

The Final Remedial Design was approved by DTSC on January 11, 1994. When SP has selected contractor(s) for the work, Regional Board staff will review the specific approach for remediation. A schedule for remedial activities was submitted on February 2, 1994, indicating that agency review of the submittals is planned for late May 1994. Remedial activities at the site are scheduled for July through September 1994.

The fourth quarter groundwater monitoring report was submitted on December 7, 1993. Groundwater table elevations decreased by less than .5 foot this quarter, except in well 4R which was dry, and well 12R which decreased two feet. Analytical data indicated metals and TPH at similar concentrations as previous quarters.

PROJECTED ACTIVITIES FOR NEXT SIX MONTHS:

Agency review and comment on specific remedial design in May - June 1994. Field work will begin July 1994.

LORENTZ BARREL AND DRUM, San Jose

The Record of Decision (ROD) for the shallow groundwater at the site was signed by the EPA in September 1988.

ACTIVITIES THIS QUARTER

The discharger submitted NPDES compliance monitoring and shallow groundwater monitoring reports during January, 1994. The site was in compliance with NPDES requirements except for rainbow trout survival rates (5%). Fathead minnow survival was within acceptable limits (95%). The cause of the reduced rainbow trout survival is being investigated.

REGULATORY EVENTS THIS QUARTER

None

PROJECTED EVENTS FOR NEXT QUARTER

Quarterly NPDES and groundwater monitoring reports will be submitted throughout the next year.

UNRESOLVED ISSUES

Removal of impacted soils and sumps on the LBD property still needs to be addressed as required in the ROD.

MIDDLEFIELD-ELLIS-WHISMAN SITES, Mountain View

EPA adopted a cleanup plan for the MEW area in June 1989. In mid-1991, EPA and two of the companies - Intel and Raytheon - signed a consent decree covering implementation of final cleanup activities; it received court approval in April 1992. EPA issued a unilateral enforcement order to Fairchild and other MEW dischargers in November 1990. Fairchild challenged EPA's ROD revision (which changed cleanup goals to standards) and other aspects of the negotiation process. A federal court dismissed the challenge, and Fairchild's appeal was dismissed in early 1993. Various responsible parties at the site are submitting RD/RA reports in response to the unilateral order or the consent decree. The companies have proposed a regional remediation system (south and north of Highway 101).

During the last quarter, interim remediation continued at several MEW on-site areas. In

November, the companies submitted a final design for the regional system (south of 101). EPA approved the preliminary design for the regional system (north of 101). The companies and the Navy resolved disputes over relative responsibilities for the regional system (north of 101) - see December EPA letter.

During the next six months, the companies will continue RD/RA tasks. EPA will review the final design for the regional system (south of 101). The final design for the system (north of 101) is due in March 1994. Design of a reuse project will wait until individual and regional system designs are completed; NASA Ames is a big potential user of treated groundwater.

MOFFETT FIELD NAVAL AIR STATION, Mountain View / Sunnyvale (DOD FACILITY)

As of March 1, 1992, oversight responsibility for this site was transferred to another Regional Board division, which will be reporting through the Department of Defense federal facilities agreement (FFA). Moffett Field NAS is not part of the MSCA.

UNITED HECKATHORN (aka: LEVIN METALS), 402 Wright Avenue, Richmond, Contra Costa County

CURRENT STATUS:

The Marine Remedial Investigation, prepared by Batelle for US EPA, was submitted in October 1993. This report refined the extent of sediment contamination in Lauritzen Canal and Santa Fe Channel. The results indicated there is a contaminant gradient from Lauritzen bayward, and vertically to the Young Bay Mud/Old Bay Mud interface.

The Draft Human Health Risk Assessment was submitted on December 23, 1993. This risk assessment evaluated workers as receptors on the site (now occupied by Levin Richmond Terminal Corp.), the nearest residential receptors located 1/4 mile north of the site, and fishermen and their families who fish in Richmond Inner Harbor area. Chemicals of concern included DDT, several other organochlorine pesticides, and lead. The result indicated that the carcinogenic and non-carcinogenic risks for industrial workers exposed via ingestion, absorption, or inhalation were within the acceptable risk ranges. For residential exposures to offsite soils, both adult and children, were within the acceptable risk

Task E2 - Site Oversight (cont.)

ranges. For exposure via human consumption of fish from Lauritzen, the carcinogenic risk was above the acceptable risk range (based on CRWQCB WQO for protecting beneficial uses of fishing).

The preliminary cleanup number for DDT in channel sediments is 1 ppm, based on FDA Action Levels for fish and shellfish consumption, and also based on biocumulative exposure to sensitive ecological receptors (i.e., California Brown Pelicans). The extent of sediments to be remediated may include all of Lauritzen Canal, at a volume of approximately 60,000 yds³.

PROJECTED ACTIVITIES FOR SIX MONTHS:

The Feasibility Study is expected in March or April 1994. Issues will focus primarily on remediation of contaminated sediments and applicable ARARs. Most of the upland areas were remediated as an interim remedial measure in 1991.

WESTINGHOUSE, Sunnyvale

The Record of Decision for this EPA lead site was signed on October 16, 1991. EPA reached agreement with Westinghouse to start remedial design in February 1992.

EPA and Westinghouse have failed to reach agreement for a Consent Decree for final remedial action. Instead, EPA issued a unilateral order that compels Westinghouse to perform the full-scale cleanup plan currently in design. Based on the final remedial design workplan, design continued this quarter and remained on schedule, and will be completed in early 1994.

Shakedown of the pilot groundwater treatment and extraction system started December 30, 1992. Full operation of the pilot system started in the second quarter 1993 and continued during the fourth quarter. During the fourth quarter, a total of 437,770 gallons of groundwater was extracted. Approximately 2 pounds of PCBs were removed during the fourth quarter, bringing the total removed since startup to approximately 10 pounds. Initial system discharge is to the City of Sunnyvale's sanitary sewer. Full scale groundwater extraction and treatment is scheduled for mid-1994.

Future Activities: Final remedial design will continue during the quarter. Westinghouse is evaluating whether design can be accelerated.

STATUS OF REGIONAL BOARD MSCA SUPPORT CONTRACTS

**DATA VALIDATION
(INTERAGENCY AGREEMENT W/CSDHS)**

The data validation agreement calls for the California Department of Health Services (DHS) to conduct data validation on analytical data from selected ground water samples for eighteen Superfund sites. To date, DHS has reviewed 36 data validation packages from MSCA sites (most sites have undergone at least two rounds of data validation).

As the data validation agreement expired at the end of the first quarter 1992, Board staff, over the coming six months, will probably not extend the agreement.

**BASELINE PUBLIC HEALTH EVALUATION
CONTRACT (W/ICF CLEMENT)**

The BPHE contract with ICF Clement expired in March 1993 and the Board can not renew it. It is not expected that the Board will seek another BPHE contract in this Phase.

TECHNICAL ASSISTANCE CONTRACT

The Regional Board is reconsidering whether to contract for technical assistance for the remainder of the MSCA due to the significant State overhead necessary to implement a contract, the value of the assistance gained, and the availability of qualified staff.

SUPERFUND LABORATORY CONTRACT

The laboratory contract has expired and it is not anticipated that it will be renewed due to the overhead and contract bidding requirements. The minimal amount of samples to be taken in the future will be absorbed within the Board's ongoing laboratory contract as overhead.

Costs

Work on this MSCA task is budgeted by MSCA site. See the Table on page III-6 for overall grant budget status that includes Site Oversight.